

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1 (currently amended): A multicolor image-forming membrane heat transfer system comprising:

an image-receiving sheet comprising an image-receiving layer; and

at least four thermal transfer sheets each comprising a support, a photothermal converting layer and an image-forming layer, and each having a different color,

wherein an image is formed by the method comprising the steps of:

superposing each one of the at least four thermal transfer sheets on the image-receiving sheet to be in a state of the image-forming layer being in contact with the image-receiving layer; and

irradiating the thermal transfer sheet with a laser beam to membrane heat transfer an image in an area of the image-forming layer subjected to irradiation onto the image-receiving layer, wherein the transferred image has resolution of 2,400 dpi or more and an area of the image-receiving layer on which an image is transferred is a size of 515 x 728 mm or more,

and the surface of the image-forming layer has a smoofter value of from 2.3 to 50mmHg,
a ratio of the reflection optical density (OD_r) of the image-forming layer to a thickness of the

image-forming layer (μm unit) is 1.50 or more, and a contact angle in relation to water of the image-forming layer and the image-receiving layer is from 7.0 to 120.0°.

2 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein a difference between the contact angle in relation to water of the image-forming layer and the contact angle in relation to water of the image-receiving layer is 73° or less.

3 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein a difference between the contact angle in relation to water of the image-forming layer and the contact angle in relation to water of the image-receiving layer is 65° or less.

4 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the image-forming layer comprises a first binder comprising a monomer unit and the image-receiving layer comprises a second binder comprising a monomer unit, and at least one of the monomer unit of the first binder and at least one of the monomer unit of the second binder are the same.

5 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 4, wherein the same monomer unit is a vinyl acetal unit.

6 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 4, wherein at least one of the same monomer unit is selected from a styrene unit, a butyral unit and a styrene acrylate unit.

7 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein each of the at least four thermal transfer sheets and the image-receiving sheet comprises a coating layer and at least one of the coating layer comprises a surface tension decreasing agent.

8 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 7, wherein the surface tension decreasing agent is capable of:

making a surface tension of 1-propanol 22.5 mN/m or less at the time of being contained in a solvent of 1-propanol to be in concentration of 0.5 % by weight;

making a surface tension of methyl ethyl ketone 22.5 mN/m or less at the time of being contained in a solvent of methyl ethyl ketone to be in concentration of 0.5 % by weight;
and

making a surface tension of N-methyl-2-pyrrolidone 25.0 mN/m or less at the time of being contained in a solvent of N-methyl-2-pyrrolidone to be in concentration of 0.5 % by weight.

9 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 7, wherein the surface tension decreasing agent is a perfluoroalkylpolyoxyalkylene oligomer.

10 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein each of the at least four thermal transfer sheets and the image-receiving sheet comprises a coating layer and at least one of the coating layer comprises at least two kinds of waxes having a melting point of 100°C or less.

11 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 10, wherein the wax is a fatty acid amide.

12 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 11, wherein the fatty acid amide comprises a fatty acid amide in which a fatty acid moiety is a saturated fatty acid and a fatty acid amide in which a fatty acid moiety is an unsaturated fatty acid.

13 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 10, wherein at least one of the coating layer comprises at least one of monomethacrylate, monoacrylate, dimethacrylate, diacrylate, trimethacrylate, triacrylate, tetramethacrylate and tetraacrylate.

14 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 10, wherein at least one of the coating layer comprises one of:

a monomer represented by the following formula (1):



wherein R_1 , R_2 and R_3 each independently represents one of a hydrogen atom, a lower alkyl group, and a $-CH_2-OCO-CR=CH_2$ group in which R represents one of a hydrogen atom and a methyl group; and

a homo- or copolymer comprising the monomer as the main component.

15 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the image-forming layer comprises a rosin-based resin having a

softening point of 100°C or less measured by a ring and ball method and an acid value of from 2 to 220 measured according to JIS K3504.

16 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 15, wherein the rosin-based resin is a resin selected from a rosin, a hydrogenated rosin, a modified rosin, derivatives of these rosins, and a rosin-modified maleic acid resin.

17 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 15, wherein the rosin-based resin comprises 30 % by weight or more of an abietic acid type rosin acid.

18 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 15, wherein the rosin-based resin is an esterified product of a rosin comprising 30 % by weight or more of an abietic acid type rosin acid and at least one kind of polyhydric alcohol selected from ethylene glycol, glycerol and pentaerythritol.

19 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the image-receiving layer comprises a rosin-based resin having a softening point of less than 130 °C measured by a ring and ball method and an acid value of from 2 to 250 measured according to JIS K3504.

20 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein a ratio of a optical density (OD_{LH}) of the photothermal converting layer to a thickness of the photothermal converting layer (μm unit) is 4.36 or more.

21 (canceled).

22 (canceled).

23 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein a ratio of the reflection optical density (OD_r) of the image-forming layer to a thickness of the image-forming layer (μm unit) is 2.50 or more.

24 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein a ratio of the reflection optical density (OD_r) of the image-forming layer to a thickness of the image-forming layer (μm unit) is 1.80 or more, and a contact angle in relation to water of the image-receiving layer is 86° or less.

25 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the photothermal converting layer comprises a heat resisting resin having a glass transition temperature of from 200°C to 400°C and a heat decomposition temperature of 450°C or more.

26 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 25, wherein the heat resisting resin is an organic solvent-soluble polyimide resin.

27 (currently amended): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the image-forming layer comprises from 20 to 80 % by weight of a pigment and 20 to 80 % by weight of an amorphous organic high molecular weight polymer having a softening point of from 40 to 150°C , and the image-forming layer has a thickness of from $0.2\ \mu\text{m}$ to $1.5\ \mu\text{m}$.

28 (currently amended): A method for forming a multicolor image using the image-receiving sheet according to claim 1 and the at least four thermal transfer sheets according to claim 1, the method comprising the steps of:

superposing each one of the at least four thermal transfer sheets on the image-receiving sheet to be in a state of the image-forming layer being in contact with the image-receiving layer; and

irradiating the thermal transfer sheet with a laser beam to membrane heat transfer an image in an area of the image-forming layer subjected to irradiation onto the image-receiving layer, wherein each of the image-forming layer is a thin film.

29 (previously presented). The multicolor image-forming membrane heat transfer system according to claim 1, wherein the contact angle in relation to water of the image-forming layer and the image-receiving layer is from 7.0 to 86°.

30 (new): The multicolor image-forming membrane heat transfer system according to claim 1, wherein the thermal transfer sheet comprises a photothermal converting layer with a deformation factor of 110% or more.